The Public Access Computer Systems Review, 1995, Vol. 6, No. 2, p.5-26.
ISSN:1048-6542
http://journals.tdl.org/pacsr
http://journals.tdl.org/pacsr/issue/view/239
http://journals.tdl.org/pacsr/article/viewFile/5987/5617

"OhioLINK: Implementing Integrated Library Services Across Institutional Boundaries."

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Abstract

This paper discusses the issues and challenges associated with the implementation of the OhioLINK system, which primarily serves public academic institutions in Ohio as well as the State Library. It provides a brief history of OhioLINK, discusses its organizational structure, presents decision-making procedures, examines public relations strategies, and analyzes issues related to cooperative circulation, collection development, and database management efforts.

1.0 Background

OhioLINK (the Ohio Library and Information Network) was authorized by the Ohio Board of Regents (OBR) in 1988. [1] The OBR is the governing body for all higher education in the state of Ohio. Funding was proposed by the OBR and approved by the state legislature as a part of the state higher education budget. Key services envisioned by OhioLINK were single-point access for multiple collections, fast full-text access and document delivery, cooperative collection management, a gateway to information, and an intelligent guide to resources. The charter institutions involved in OhioLINK were 13 four-year public universities, two public medical colleges, two four-year private universities, and the State Library of Ohio. From the beginning, it was envisioned that the 23 two-year public community and technical colleges would be full participants in the second phase. This combined group includes over 460,000 students, 340,000 FTE staff, and 90 primary document delivery sites.

One fundamental principle from the earliest days of OhioLINK was that a single integrated library system would be selected for all institutions rather than attempting to link diverse systems. Innovative Interfaces, Inc. (henceforth called Innovative) provided that system with local installations on each campus and a central site in Dayton, Ohio. Central funding is provided for the local hardware and software for the Innovative system, retrospective conversion, authority control, the telecommunications backbone, software development, reference databases, and document delivery. Each participating institution is expected to fund local site compatibility and preparation, hardware and software maintenance, local telecommunications, and local computer capacity expansion and services.

The central site was activated in November 1992. The current components of the system

include a continuously updated master-record central catalog with bibliographic and circulation data. [2] The system also provides a seamless connection for searching from local catalogs to the central catalog; patron-initiated circulation of materials between libraries without staff circulation of materials between libraries without staff intervention; statewide 24-hour ground courier service; centrally mounted newspaper and magazine article databases through the same interface, which are linked to system-wide holdings and circulation information; and an Internet Gopher. Other features implemented in 1994 include the integration of records from the Center for Research Libraries into the central catalog, access to monographic table of contents records from BNA, a gateway through the central site to OCLC's FirstSearch system (including the WorldCat database) and RLIN's Eureka system, and UMI image delivery from the central site to individual institutions.

2.0 Organizational Structure

OhioLINK is managed by a central staff of seven full-time employees located in Columbus, Ohio. This site was chosen because of its central location in Ohio and its proximity to the OBR. OhioLINK staff include an executive director (Tom Sanville, formerly Vice President for Marketing for OCLC), three librarians charged with managing the work of the committees and particular portions of the system, two technical staff members who manage the computers, and a public relations staff member. The computers that support the system are located at Wright State University in Dayton, Ohio.

A Governing Board reports to the OBR and has general oversight of OhioLINK. This Board consists of university provosts and community college chief instructional officers.

There are four advisory councils: library, technical, strategic, and user. The Library Advisory Council (LAC) is composed of the directors of the original 18 libraries and representatives of the community colleges. This is the most active council. The LAC has a steering committee known as the LAC Coordinating Committee (LACCC). In addition, four working committees report to the LAC: Cooperative Information Resource Management, User Services, Intercampus Services, and Database Management and Standards. These are true working committees chaired by librarians from the various institutions.

The working committees have very specific responsibilities. Cooperative Information Resource Management identifies electronic information resources for the system and analyzes and coordinates collection development. User Services improves user interface design and content, implements electronic information resources, and provides training, education, and promotion. Intercampus Services develops physical and electronic document delivery capabilities and coordinates local and central site operational compatibility. Database Management and Standards establishes bibliographic, authority, and holdings standards and practices. It also establishes maintenance and quality procedures and directs the use of the acquisition and serials control components. [3]

OhioLINK has been greatly influenced by and benefitted from the utilization of electronic mail during the implementation. Announcements, agendas for meetings, assistance requests, question and answer forums, system downtime, and other information can be broadly distributed

via the OhioLINK list server. Each committee has its own list for the discussion of issues, referral of information, and other purposes. Anyone in OhioLINK interested in the work of a committee can be added to the committee's list.

For example, the directors' list was used to discuss a very significant issue related to pricing for the UMI image service to be provided to the libraries. This discussion occurred over the course of several weeks between monthly LAC meetings, and it allowed the final decision to be made quickly during the actual meeting.

3.0 Decision-making

There are several issues and challenges associated with the implementation of an integrated library system across multiple institutional boundaries. Decision-making is a key challenge. Most of us have heard the joke about a camel being a horse designed by a committee; well, it is possible to design an thoroughbred with a committee, but it takes a great deal of hard work, compromise, and setting aside of egos to accomplish it.

The most significant policy that binds the participants in OhioLINK is a formal "Memorandum of Understanding" signed by each institution. Although OhioLINK operated for a number of years without this, the memo documents the agreements between the participants and articulates governance structure, the primary functions of the system, the duties of the OhioLINK central office, the duties of the member institutions, and the ownership of equipment purchased for an institution by OhioLINK. In the context of decision-making there are three important aspects: operational decisions, policy decisions, and future planning.

3.1 Operational Decisions

Effective day-to-day decision-making requires that an organization have good leaders, who are authorized to make decisions. Although OhioLINK is very heavily a volunteer endeavor it has had full-time leadership from the beginning, when various librarians were loaned from their institutions to serve on the project. Current leadership makes all of the management decisions on a daily basis guided by goals and objectives and mission documents approved by all levels of the governance structure. For example, if one of OhioLINK's goals is to provide a response time of X on the citation databases, OhioLINK staff have the authority to make decisions related to the expenditure of funds for hardware to keep the system operating at that level. The mechanism that keeps this authority in balance is that OhioLINK staff have regular communication with staff at participating libraries via appropriate lists and through meetings about the status of various issues and the actions taken.

3.2 Policy Decisions

More important than these daily decisions are the ongoing policy decisions that must be made. OhioLINK institutions range in size and complexity from The Ohio State University (OSU) with 50,000 students to the Belmont Community College with 1,100 students. Policies must be set

that work for both of these extremes as well for the libraries in the middle.

The best example of a decision that was made on the basis of size is the decision about when to make WorldCat available to the public via FirstSearch. The earliest possible date was around June 1, 1994, with 20 simultaneous users. OSU was the only institution that wanted the access as soon as possible because there are 20,000 students on campus in the summer. The directors of most of the other libraries did not see the need for having WorldCat access that quickly, and they recommended that money be saved by making the system available in the fall quarter. On another front, the committee chairs and the systems librarians wanted to bring the system up in August 1994 for two reasons: to see if the number of simultaneous users was adequate and to give the staff time to learn how to access the system. The resulting compromise was to implement the system on August 1, 1994.

Challenges can arise as a result of differences of philosophy. For example, one institution is very service oriented with well-trained and well-staffed reference areas. This institution wants a sophisticated interface used as a default for the MEDLINE database because it has the capacity to deal effectively with its user population. Another institution is not so well-funded and its mission is focused on purchasing as much material as possible, even if it must reside in an uncataloged backlog for years. This institution has a very large user base, it is not able to staff its reference desks very well, and it encourages users to utilize dial-access as much as possible.This institution wants the default interface to have lots of help screens, and it wants OhioLINK to provide user information packets. This difference in approach also reflects a difference in opinion about the sophistication of users on each campus.

In another example, a decision was made in the early days of OhioLINK that records from the Center for Research Libraries would be loaded on the central catalog. This is a great resource for libraries that are CRL members, but what are the consequences for libraries that aren't CRL libraries? Users are given access to titles owned only by CRL, yet their institution may not be able to supply the material.

On another front, the smaller institutions are convinced that OSU patrons will strip their shelves of material once it fully utilizes OhioLINK. By contrast, OSU faculty are convinced that OSU resources are so rich that all the other institutions will borrow all of the OSU Libraries' resources and those materials won't be available when faculty members want them.

What are the key elements to success in resolving these types of disagreements where compromise is clearly required? First and foremost is a feeling of involvement. OhioLINK has gone to great lengths to ensure that all institutions are equally represented on the working committees. When committee appointments are made each year, the list of committee members is carefully reviewed and even tallied to ensure that no institution has full membership on more than three of the four committees. There is a concession to size since the larger libraries often have more staff to provide as volunteers and often have unique expertise that is vital to a committee. In this case, libraries such as OSU, Kent State University, and the University of Cincinnati (UC) may have as many as three full members on the working committees, but not four. Some institutions are simply too strapped for staff to participate as full members and have opted to have only associate membership on the working committees. The smaller libraries who do want to participate are

guaranteed one or two full members.

Second is a willingness to listen to the various positions and set aside individual preferences for the good of the whole. For example, OhioLINK struggled with whether or not to charge patrons for the production of full-text articles from the UMI image databases. Many institutions, particularly the medical colleges, believed that students would heavily abuse the process if there were no fees for requesting articles. Some libraries argued for a modest fee ranging from five to 15 cents a page to deter abuse. Other libraries were more concerned about the staff costs associated with collecting this money rather than potential abuse. OhioLINK explored the possibility of charging the costs to the user's patron record, which raised the question of how to advise the patron of this procedure. How would you make patrons pay fees if you did not limit their borrowing privileges until the fees reached a substantial figure? Other libraries favored a debit card system that would be attached to each terminal. For libraries with a large number of terminals and remote users, this solution would create many problems. The final decision was that no charges would be levied for the first year of usage. Plans will be developed with Innovative to provide a debit card system that can be implemented if the free system is not successful. The results of the test will be reviewed in a year.

Other policy decisions revolve around who gets to participate. The inclusion of the charter institutions and the community college libraries in OhioLINK was mandated by the OBR in its original vision of the system. However, questions are now being raised about participation by other libraries, such as private colleges in Ohio who have Innovative systems. Should they be allowed into the system? Will they be full participants with all rights and privileges? How will the costs be prorated since the majority of funding for OhioLINK comes from the state of Ohio? Do all who request participation get to join as long as they can afford it? Do they enhance the resources available or simply drain the system? What is their role in the governance structure? Since OhioLINK is funded almost exclusively by state funds, shouldn't all Ohioans be allowed to borrow material and use the resources? How would a vendor react if asked to price a database for all Ohio citizens? What leverage would be available to ensure return of materials from users not affiliated with a member institution? In the current policy structure of OhioLINK, each institution is responsible for any transgressions of its own patrons. This obligation could become quite substantial if all Ohio residents were given full privileges. At present, a small task force of the Library Advisory Council is drafting a proposal for inclusion of the private colleges, including their obligations and possible funding mechanisms.

Full OhioLINK participants faced implementation issues. Since the staff at OhioLINK and at Innovative could only implement so many sites in a given time frame, a major issue was who would go first. UC was using an old automated system that was on its last legs. It was anxious to be the first site implemented, and it was willing to absorb the risks associated with that role. Although UC was able to implement the new system quickly, it received the earliest generation of the hardware in use with the OhioLINK system. In fact, UC had to upgrade to a DEC Alpha machine at its own expense. On the other hand, OSU opted to be last for a variety of reasons, most of which were associated with the sheer size of the OSU database. As a result, OSU received a new-generation DEC Alpha as its base machine, which was purchased by OhioLINK. A negative consequence of going last was that OSU was precluded from serving as a test site for specific system features.

Other participation issues involve which institutions will get to test individual products, such as UMI PowerPages or patron-initiated circulation. These decisions are often made as a result of which institutions volunteer for a particular product as well as what local technical expertise is available to test the products.

3.3 Future Planning

Decisions must also be made about OhioLINK's future direction. In May 1994, OhioLINK sponsored a two-day planning session that included the members of the Governing Board, chairs of the working committees, and the LACCC. This session was moderated by an outside consultant, and it focused on reviewing the OhioLINK operating plan and determining if OhioLINK was still on the right track. Doris Brown, Library Director at DePaul University, a participant in the governance of the ILLINET Online system in Illinois, provided one of the keynote addresses. During her presentation, Brown posed a number of questions that should be considered by a consortium like OhioLINK. Many, if not all of these questions, had been addressed by OhioLINK, but they are useful for others embarking on a similar project.

1. What are the implications of receiving an appropriation from the state? Is it for all state residents?

2. What happens if priorities change at the funding or governing agency? What if the fiscal situation or the economy change? What steps are being taken to ensure funding?

3. Who really runs the consortium--the libraries, the provosts, the executive director? Is the current governance too cumbersome? Can it survive the test of time? Are all institutions equal? Should representation be guaranteed by type of institution?

4. If the private colleges have to pay to participate, will they get reimbursement for contributing their resources? Will businesses pay to use the system? If so, to whom--the consortium or the individual libraries? Do public libraries have to pay for access?

5. Do net lenders/borrowers get reimbursement? Can libraries buy resources and decide not to share them?

6. Do the libraries view each other as competitors? To whom does the institution owe primary allegiance? If someone wants to leave the pack, how will it be handled? [4]

As mentioned earlier, OhioLINK provides funding for software enhancements for the Innovative system. This is not the regular software development for all Innovative users that is covered by annual maintenance fees, but rather OhioLINK-specific enhancements that Innovative is paid to develop on a particular time schedule. For example, prior to OhioLINK, Innovative did not have a central union catalog that could incorporate the individual records of the member institutions and provide real-time updates of bibliographic and circulation information. This was the keystone of OhioLINK, and the development of this software by Innovative was financed by

OhioLINK. OhioLINK retains no ownership of the products developed for it. Instead, Innovative is free to sell these products to other libraries, and it is currently marketing a number of them to its users.

How do we negotiate the enhancements to the system each year? The enhancement process begins with the working committees that develop action plans reflecting ongoing priorities within the project. The action plans provide a description of the plan, the timing required, the priority assigned by the committee (i.e., critical, very important, or important), the plan's benefit to users, the components of the plan, and the plan's development phases. When necessary, detailed specifications are also developed. These action events are reviewed with the other chairs and the LACCC, often resulting in changed priorities. At the end of the OhioLINK review, these plans encompass a small notebook that is sent to Innovative for review prior to a three-day development meeting. This meeting is conducted in Columbus and attended by the four committee chairs, the LACCC, OhioLINK staff, and high-level representatives from Innovative. The details of each event are discussed with Innovative so that any questions can be addressed at that time. After a period of time for review, Innovative responds to the plan by indicating which enhancements they are willing to undertake in the coming year, including the development cost. These details are negotiated and finalized by the OhioLINK staff in consultation with the LAC. Through this process, OhioLINK is able to identify its needs and provide significant guidance about the development of particular system features. Likewise, Innovative has a chance to see the priorities of the project--a process that results in an effective partnership.

4.0 Public Relations

An effective public relations effort is important to OhioLINK. Librarians are inclined to toil away unnoticed and unappreciated even though they are often making great strides in patron service. This approach serves them poorly in the battle for resources. As a line item in the state's budget, it is imperative that OhioLINK maintain a great deal of visibility. In addition to the executive director, OhioLINK employs a half-time staff member experienced in public relations who develops press releases and announcements of new products and services and provides user documentation. In addition, the executive director maximizes opportunities to highlight OhioLINK to groups throughout the state and the nation as well as to develop media events associated with significant milestones.

One situation that illustrates the success of this venture is the celebration of the initiation of patron circulation, which occurred during the monthly OBR meeting in downtown Columbus. The celebration was conducted at the beginning of the meeting on which a primary agenda topic was the faculty workload policy for academic institutions. The chairman of the OBR was asked to initiate a borrowing request on OhioLINK for a title published by the Board, which was available at Youngstown State University (the alma mater of the chairman). When the request was completed, the OhioLINK executive director pulled the piece from the podium in an OhioLINK canvas bag and "delivered" it to the chairman. Each member of the Board was given a framed copy of the introductory patron circulation poster commemorating the occasion. The LAC meeting for the month had been scheduled for the same day in the downtown offices of the Board so that all the directors who were in attendance were also recognized for their participation. The event was picked up by the Columbus and Cleveland papers. Publicity like that can't be bought.

5.0 Cooperation Issues

There are very specific issues, policies, and standards that must be negotiated in a multi-type integrated library system. This section examines issues related to cooperative circulation, collection development, and database management efforts.

5.1 Circulation

OhioLINK places a high value on providing resources around the state regardless of owning location within 72 hours (the goal is 48 hours). The central catalog is the first step in the process, providing real-time information on titles and volumes owned and their circulation status. The second step is the statewide delivery mechanism that guarantees delivery from any OhioLINK site to another (the delivery time varies based on each library's ability to retrieve and package the material for shipment). OhioLINK negotiated a statewide contract for the participants with a commercial package delivery company that delivers to each primary site once a day at a fixed time. The secondary sites are visited when a piece is being delivered to them or as needed when they have a piece to ship. This delivery system currently serves 101 sites in Ohio at no individual costs to OhioLINK institutions.

Patron-initiated circulation was offered beginning in January 1994. As soon as a patron initiates a request for a title, the system verifies the patron's borrowing privileges and the item's circulation status, checks to see that the item is unavailable at the patron's library, and informs the patron on the screen whether the request has been placed or denied. A later development phase calls for the selection of the item to be made automatically by the system since the location of the piece has little effect on the delivery time. This automatic processing would also include an algorithm that rotates the load on each institution so that no single institution would carry a greater burden than the others. Table 1 summarizes patron-initiated circulation since its inception.

Table 1. Patron-initiated Circulation in 1994

Month	Loan Transactions	Number of Institutions
January	1,601	9
February	4,630	10
March	6,220	10
April	6,366	11
May	4,510	11
June	4,471	12
July	4,496	13
August	4,141	13
September	8,294	14
October	11,360	14
November	10,185	15
December	5,015	15
TOTAL	71,289	

Patron-initiated circulation is fraught with policies that have to be negotiated and followed. Consider the following:

1. What should the standard replacement cost be for a lost item? What should the statewide processing fee be?

2. What loan period should be established for material loaned to OhioLINK patrons? Should the loan period through OhioLINK be the same for faculty and students even though that loan period may differ for faculty and students locally? Does the loan period need to be lengthened to allow for transit time? Is the material discharged when it is returned to the patron's library so that the patron is not charged if the item is lost in transit between libraries? Who is responsible if the material is lost in transit?

3. Who is held responsible for material lost by patrons? Where should the fines and lost material fees be collected? Should the fees be retained by the collecting library or the library that owns the piece? Is an elaborate accounting scheme needed to keep track of these fees by institution?

4. Should borrowing and lending privileges be extended to OhioLINK institutions before their databases are reflected in the OhioLINK central catalog? If so, how can this be managed? Is on-site borrowing allowed?

5. Is any category of material, such as new imprints, exempted from borrowing? Does the local patron receive priority over an OhioLINK loan? Under what circumstances is a title recalled from an OhioLINK patron? Is there a minimum loan period before a title may be recalled?

6. Is material borrowed through OhioLINK renewable? If so, is it renewable for more than one renewal period?

7. What happens if an OhioLINK request cannot be filled? Is the request automatically referred to another OhioLINK library? Is the patron notified of the delay?

8. Will fines be charged for overdue OhioLINK material? How will this function if an institution does not normally charge fines for other types of material?

9. How will material be packaged to avoid damage in transit? Will institutions be required to package material in a certain way by the delivery service or to ensure equality of treatment for all materials? For example, OhioLINK has mandated bubble-wrapped packages for all material travelling via the commercial delivery service. These bubble-wrapped packages are then transported in large canvas sacks ensuring that each item is separately protected. (The bubble-wrapped packages and the canvas sacks have been provided to each participant at OhioLINK's expense.)

10. On the local level, what are the implications of these central policies? Should local policies be changed so that they are in conformance with OhioLINK policies? For

example, if an OSU patron loses an OhioLINK book, the processing fee is $25.00; however, if the same patron loses an OSU book, the processing fee is $17.50. Explaining this to the patron could be difficult.

These questions only scratch the surface and only deal with loaning physical pieces that must be returned to the owning library. The goal for the basic OhioLINK document delivery system is for the system to evaluate the holdings information in the central catalog and validate the patron's eligibility to borrow. There are a number of delivery options including electronic article image files (e.g., UMI's PowerPages), a commercial off-site supplier (e.g., OCLC's ArticleFirst), the home library, or another OhioLINK lending library. The options for physical delivery include library printers, the patron's fax machine, and interlibrary loan offices. The perfect solution would be a "magic request router," and OhioLINK is looking toward a future where such a process could work.

What issues affect the delivery of journal articles today?

1. Is there any limit on the number of articles a patron can request? Is the system sophisticated enough to identify articles that may be available locally and to deny requests for them?

2. How will holdings be reflected and updated to ensure successful request and delivery of articles?

3. Will OhioLINK provide any subsidy to support this vastly increased volume of photocopying and retrieval of material?

4. How will copyright compliance be tracked and monitored? What mechanisms will be used to ensure compliance?

5. Will the patron be allowed to order copies from an off-site supplier or to retrieve them from the image database in lieu of going to the shelf for material? Who will bear the costs for such "convenience" decisions?

5.2 Collection Development

Another key component of OhioLINK was the expectation that resources would be more effectively used throughout the state if their availability was known. OhioLINK has been very mindful of the expectation that acquisitions expenditures could be reduced as a result of the project. OhioLINK has worked hard to create the perception that collection duplication will still be necessary and that any savings will be used to enrich collections. This will be an ongoing battle as OhioLINK wades into the thick of cooperative collection development. The current analysis of overlap between holdings on the system has been striking and supports OhioLINK's position that duplication is already relatively small.

Sandy Weaver Westall of Innovative provided this analysis of the central database as of April 3, 1994.

2,981,522 bibliographic records representing 5,767,228 bibliographic records on the local systems

60% (1,790,470 bib records) were uniquely owned by only one institution

17% (503,296 bib records) are owned jointly by two institutions

9% (270,863 bib records) are owned jointly by three institutions

The percentages continue to drop as fewer and fewer records are jointly owned by more libraries. Approximately 100 bib records are owned by all 11 participating institutions. [5]

The fact that 60% of the titles are uniquely owned materials has been consistent for most of the project.

As of September 9, 1994, the central catalog had grown to include 3,369,444 bibliographic records representing 6,648,750 institutional holdings on local systems. The Center for Research Libraries records loaded up to this point were 84% unique. [6] When these statistics were produced, a number of the larger libraries such as OSU and Kent State University had not been loaded on the central database. When initial implementation is completed, seven to eight million unique titles and 15 million plus holdings are expected.

So far, OhioLINK has focused primarily on sharing electronic resources such as citation databases. Again, the relative size of participating libraries is an issue. One of the fundamental tenets of OhioLINK is to avoid the unnecessary duplication of resources. This means that if OhioLINK provides central access to ABI/Inform, then individual libraries should not purchase the database locally. This is certainly efficient use of state resources, but what are the consequences for a large library like OSU? Have adequate simultaneous users been provided centrally to support the 50,000 potential users at OSU? Is the interface being provided as good as the one provided locally?

Additional relevant questions are posed in an article by Gay Dannelly:

Does the reduction in cost outweigh the preference for particular search systems at the local level? How long should such comparisons be tested, when the database is already at the local library, in order to reach a conclusion? To what extent does a library try to anticipate the selection decisions of their consortium or invest in local provision of services, only to change the service when shared databases become available? [7]

5.3 Database Management

In the early stages of OhioLINK, the need to retain as much local autonomy as possible was often discussed. For example, the database profile that governed how the database would be indexed (e.g., what fields would be displayed) was determined only for the central catalog. Local sites were free to profile as they saw fit, even though it was recognized that differing profiles might produce different search results between the local catalog and the central catalog and cause user

confusion. Nevertheless, nothing was mandated for the local sites.

Over time, the need for significant conformity of policy and procedure, particularly where database management is concerned, has been recognized and accepted. As part of the commitment to access, it was agreed early on that libraries would display their on-order and in-process records locally as well as in the central catalog. Although this was not very controversial, it did mark a new step for many local libraries that had never had this material accessible to the public before. As a result, several policy issues arose:

1. Should saves be allowed locally and/or centrally for on-order material?

2. Were there categories of material that should be suppressed because they were less likely to be received (such as out-of-print search requests)?

3. Would patron expectations be raised unnecessarily for material that might not be available for some extended period of time?

4. Once material arrived and landed in a cataloging backlog, could it be retrieved and loaned quickly if requested?

This discussion quickly led to an analysis of what data elements were required for a record to be included in the central catalog. Records used for acquisitions purposes may be more minimal than those that are considered minimal from a cataloging perspective. Innovative's only mechanism for identifying and automatically combining duplicates locally and at the central site was via a match on an OCLC number. In the central catalog, this presented a significantly increased chance of duplication since there was no way to link duplicate records except via the machine match of OCLC numbers. This meant the possibility of extensive duplication of records in a number of cases. Approval records rarely contain OCLC numbers. In some cases, institutions were limiting OCLC searching due to increasing OCLC costs when the title could be verified elsewhere, such as in Books in Print.

As a result, the development agenda that year included a provision to enhance the duplicate detection algorithm to include a cascading numeric match based on ISBN if no OCLC match was found. Innovative will implement this feature in May 1995 after testing is complete. Prior to the availability of the feature, the OhioLINK libraries agreed to include existing OCLC numbers in minimal records before they were added to the central catalog. Although this represents cost increases for some libraries, it was agreed that the cost of unwanted duplication was greater. However, most libraries accepted that this was a short-term problem. The standard also excluded several categories from inclusion in the central database: approval records prior to their acceptance by the library (so that unreviewed and possibly rejected titles will not appear in the central catalog), GPO shipping list records until the OCLC record number is available, and on-the-fly circulation records.

The minimal-level records issue brings to light another serious concern for OhioLINK libraries. As charter members of the OCLC system, Ohio libraries are very committed to OCLC. However, some of the community college libraries are not members of OCLC. These and other

libraries have questioned the availability of the central database as a source of cataloging. OhioLINK's goals are specifically related to the provision of service to users throughout the state, and the project was not intended to supplant OCLC services in any way. As a result, OhioLINK has worked diligently to prevent the development of any features that would enable the central catalog to be used as a source of local cataloging. For example, the transfer of data is strictly unidirectional; bibliographic data flows from the local catalog to the central catalog. It does not flow back from central catalog to the local catalog.

Another unique feature of the OhioLINK central catalog is the structure of the bibliographic and holdings records. Bibliographic records in the central catalog are "owned" by the library that submitted the original record. (The earlier a site is loaded to the central catalog, the greater the number of records it "owns.") OhioLINK is very egalitarian in this respect. No institution's cataloging is deemed better than another's except in the case of MeSH headings. The libraries that maintain MeSH subject headings as well as LC subject headings are given priority over the libraries that do not. For example, if the original owner of a record was Kent State University (a non-MeSH library) but the title was sent to the central catalog at a later date by Case Western University (a MeSH library), the Kent State bibliographic record would be overlaid with the Case Western bibliographic record. However, in most cases, when the second library sends its record to the central catalog and it matches an existing record, only the holdings information for the new record is added. The bibliographic record remains the same. OhioLINK does have in place an "errors of consequence" process that allows libraries to report these errors to the owner of the record, who is expected to correct that record. The notification process is via regular mail or e-mail to designated contacts at each library. Libraries are cautioned that this is a process designed for substantive errors, including typographic errors in access points, and not for differences of opinion about how titles were cataloged.

Summary holdings for each library must reside in a variable-length field called the "Library Has" field that is stored in the serials check-in record. This field cannot reside in the bibliographic record because it might be overlaid and lost. These fields are maintained and updated locally in the serials check-in record. On a regular basis, the central system takes a snapshot of these fields at each local site for storage and display in the central catalog. Libraries that have individual item records for each bound volume will see these item records plus the summary holdings displayed centrally. However, summary holdings provide critical links to citations in the citation databases. When a patron searches the citation databases and requests information on holdings, only these summary statements are provided. The individual item records are not visible at that time.

Library Has statements have been a rather significant and time-consuming issue for the Database Management and Standards Committee. After considerable evaluation of the USMARC Format for Holdings Data, the committee recommended a Library Has format that meets the MARC standard. Even though the standard has been in effect for over a year, the quality of information in this field is uneven. Libraries that brought summary information from an existing system generally had to bring the information as it was currently stored with little regard for the new standards. Some libraries had no summary holdings and have begun to build these as time permits. Some libraries are very carefully recording each missing issue and volume in what subsequently has become a very long and confusing statement. Other libraries are simply entering

open entries for currently received titles with no indication of any gaps, or, for a dead title, the first and last volumes owned are noted with no information about whether any volumes are missing in between. The creation of these notes is one thing, but ongoing maintenance of them is another. Maintenance requires a tremendous commitment of staff time.

One might think that it is overkill to try to reach conformity in such a field. This might be true were it nothing more than an information field. However, the patron request feature for article-level material based on citations in the database is scheduled to work from this field. Unfortunately, this is a free-text field that makes it virtually impossible to program the system to analyze the information in such a way as to determine whether a particular issue is available. The initial test of this process will show the Library Has statements from all owning libraries to the patron when that individual is viewing a particular citation. The patron will have to read the statement and determine where the particular issue is held. The patron may then request a copy of that volume or article through the system. Many believe that this process can work efficiently; others believe there will be many false hits. This feature will be turned on for testing in 1995.

6.0 Conclusion

OhioLINK is considered a good example of statewide academic library cooperation. The participants are all very pleased with the progress that has been made, and they all still get along and actually rather enjoy the time spent working together. OhioLINK has certainly drawn the public academic institutions in the state closer together.

Notes

1. An earlier version of this paper was presented at the Tenth Texas Conference on Library Automation, Houston, Texas, 14 October 1994.
2. The OhioLINK catalog is available on the Internet at the following URL: telnet://cat.ohiolink.edu. Login using the word "ohiolink." You will not be able to see the citation databases that are restricted to OhioLINK institutions, but you will be able to use the central catalog.
3. Factual information was provided by OhioLINK staff.
4. Doris Brown (Presentation made to OhioLINK Planning Session, Columbus, Ohio, 24 May 1994).
5. Sandy Weaver Westall, e-mail message to the OhioLINK list, 21 April 1994.
6. Sandy Weaver Westall, personal fax message, 1 October 1994.
7. Gay N. Dannelly, "Strategic Issues in Planning for Electronic Resources," Technicalities 14 (May 1994): 14.